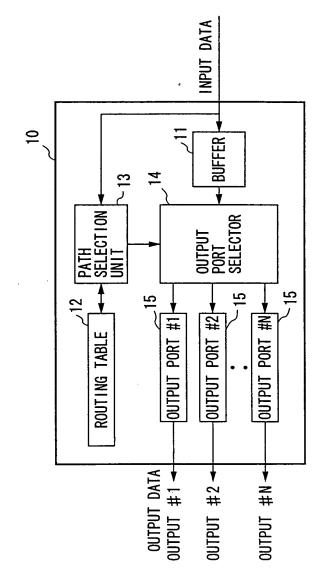


W. 11.



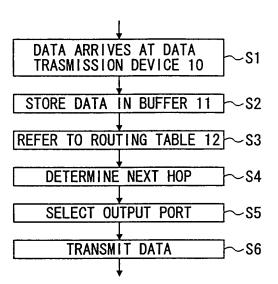
INTERNET b 9 ਰ ISP-B ISP-A Ø ပ DATA TRANSMISSION DEVICE

FIG.2

PRIORITY ROUTE Ø OUTPUT PORT NEXT HOP ပ a Ø က ပ HOST/NE NET ASST FAT DESTINATION INTERNET ISP-A ISP-B

*

FIG.3



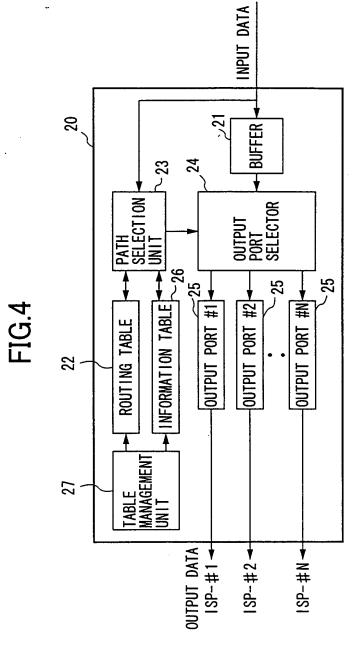


FIG.5A

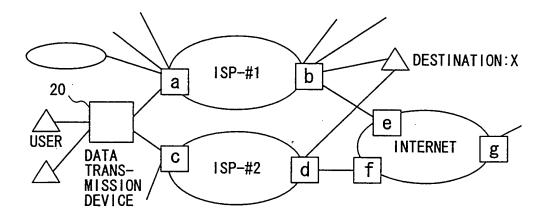


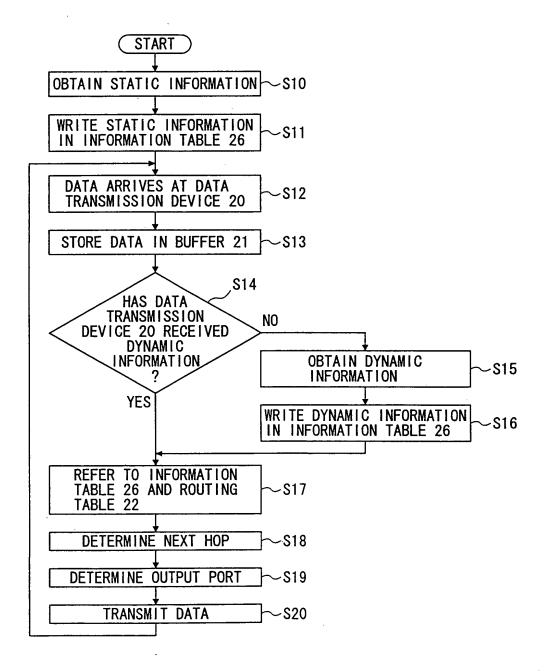
FIG.5B

DESTINATION	HOST/NET	NEXT HOP	OUTPUT PORT	MOST APPROPRIATE ROUTE
ISP-#1	NET	а	1	
ISP-#2	NET	С	2	
Х	HOST	а	1	*
		С	2	
INTERNET	NET	а	1	*
		С	2	

FIG.5C

DESTINATION	"VIA" NETWORK	MESSAGE-PACKET RETURN PERIOD	FEE INFORMATION
Х	ISP-#1	2	1
	ISP-#2	10	1

FIG.6



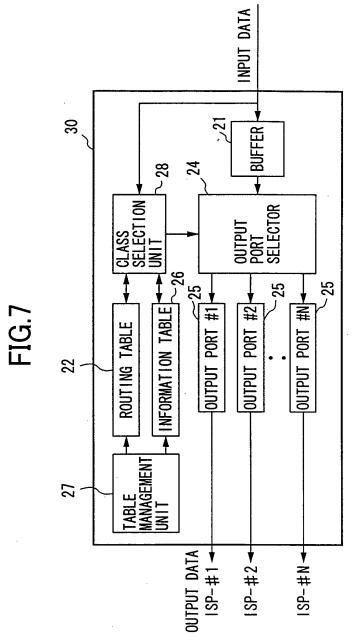


FIG.8A

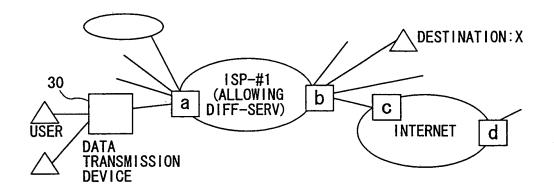


FIG.8B

PROPRIATE UTE	FEE	*			*			*
MOST APP RO	SPEED	*		*		*		
OUTPUT PORT SERVICE CLASS MOST APPROPRIATE ROUTE			EF-PHB	AF-PHB	BEST EFFORT	8HJ-13	AF-PHB	BEST EFFORT
OUTPUT PORT		ļ				-		
NEXT HOP		B	В			8		
HOST/NET		NET	HOST			NET		
DESTINATION		1SP-#1	×			INTERNET		

FIG.8C

DESTINATION	SERVICE CLASS	SERVICE CLASS RETURN PERIOD	FEE INFORMATION	VALUE FOR SPEED AS FIRST PRIORITY	VALUE FOR FEE AS FIRST PRIORITY
×	EF-PHB	-	20	22. 1	46.4
	AF-PHB	4	10	20.9	27. 4
	BEST EFFORT	20	1	57.0	26. 2

FIG.9

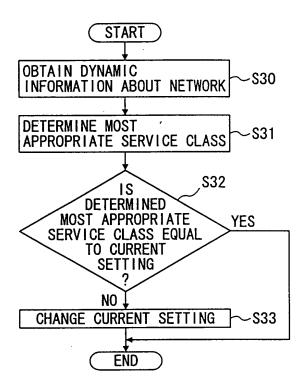


FIG.10A

iп								
ROPRIAT UTE	FEE	*			*			*
MOST APP RO	SPEED	*	*			*		
OUTPUT PORT SERVICE CLASS MOST APPROPRIATE ROUTE			EF-PHB	AF-PHB	BEST EFFORT	EF-PHB	AF-PHB	BEST EFFORT
OUTPUT PORT		1	-			_		
NEXT HOP		а	а			B		
HOST/NET		NET	HOST			NET		
DESTINATION		1SP-#1	×			INTERNET		

FIG.10B

VALUE FOR FEE AS FIRST PRIORITY	46.0	30.9	23. 1
VALUE FOR SPEED AS FIRST PRIORITY	21.3	29.1	49.6
FEE INFORMATION	20	10	-
MESSAGE-PACKET RETURN PERIOD	2	20	50
SERVICE CLASS RETURN PERIOD	EF-PHB	AF-PHB	BEST EFFORT
DESTINATION	×		

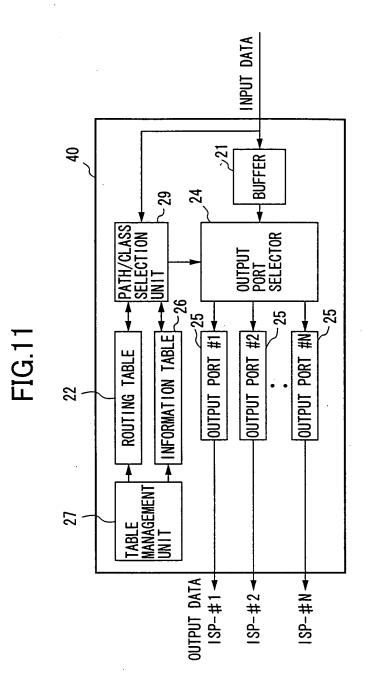


FIG.12A

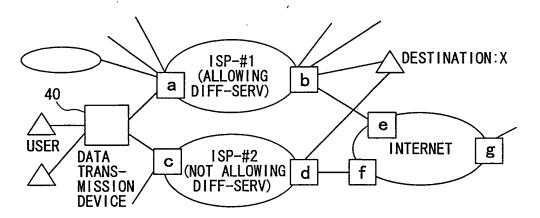


FIG.12B

ROPRIATE JTE	FEE	*	*				*				*
MOST APP ROL	GEED	*	*		*				*		
OUTPUT PORT SERVICE CLASS MOST APPROPRIATE ROUTE		1	ı	EF-PHB	AF-PHB	BEST EFFORT	BEST EFFORT	SHG-73	AF-PHB	BEST EFFORT	BEST EFFORT
OUTPUT PORT		ļ	2	1			2	1			2
NEXT HOP		8	ຽ	B			ပ	В			ဝ
HOST/NET		NET	NET	HOST				NET			
DESTINATION		ISP-#1	1SP-#2	×				INTERNET			

FIG.12C

 -			_	
VALUE FOR FEE AS FIRST PRIORITY	43.3	24.6	19.3	12.8
VALUE FOR VALUE FOR SPEED AS FIRST PRIORITY PRIORITY	20. 2	17.1	40.9	21.8
FEE INFORMATION	20	10	-	2
MESSAGE-PACKET RETURN PERIOD	,	7	20	10
NETWORK SERVICE CLASS	EF-PHB	AF-PHB	BEST EFFORT	(BEST EFFORT)
ΙΑ″	1SP-#1			1SP-#2
DESTINATION "V	×			

FIG.13A

ROPRIATE JTE	FEE	*	*				*				*
MOST APP Rol	SPEED	*	*				*				*
OUTPUT PORT SERVICE CLASS MOST APPROPRIATE ROUTE		ı	-	8Hd-43	AF-PHB	BEST EFFORT	BEST EFFORT	EF-PHB	AF-PHB	BEST EFFORT	BEST EFFORT
OUTPUT PORT		1	2	1			2	-			2
NEXT HOP		B	S	В			ပ	В			S
HOST/NET		NET	NET	HOST				NET			
DESTINATION		1SP-#1	ISP-#2	×				INTERNET			

FIG.13B

DESTINATION	″VIA″	SERVICE CLASS	NETWORK SERVICE CLASS RETURN PERIOD INFORMATION	FEE INFORMATION	VALUE FOR VALUE FOR SPEED AS FIRST FEE AS FIRST PRIORITY	VALUE FOR FEE AS FIRST PRIORITY
×	1SP-#1	EF-PHB	2	20	20.3	43.3
		AF-PHB	10	10	19. 5	25. 7
		BEST EFFORT	40	1	42.7	20.0
	1SP-#2	(BEST EFFORT)	15	2	17.5	11.0

FIG.14

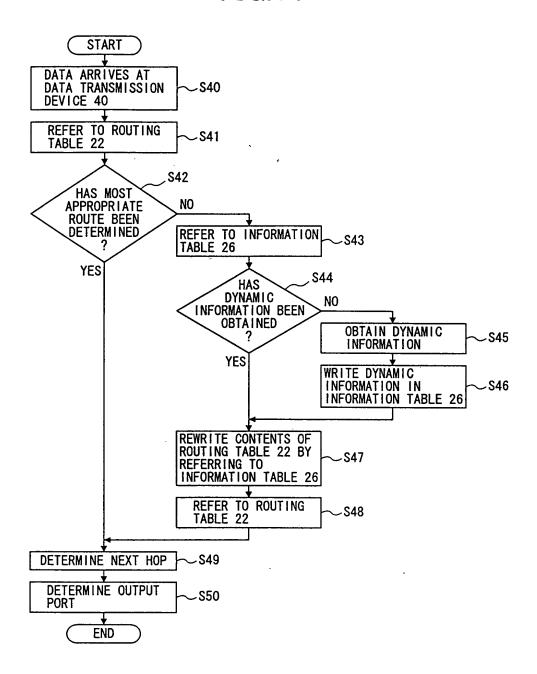


FIG.15

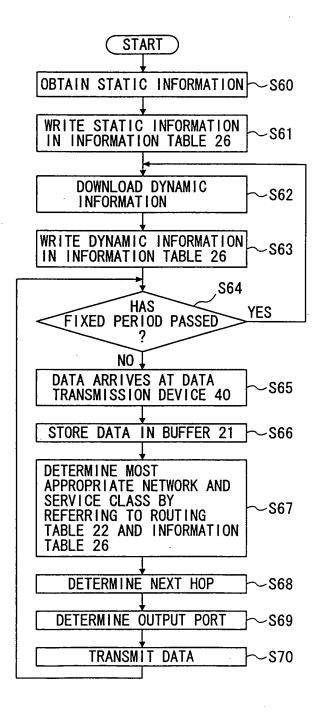


FIG.16

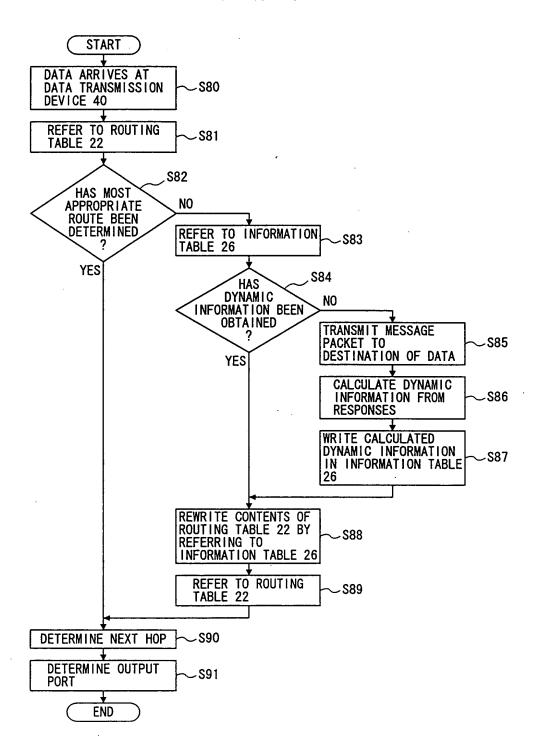


FIG.17A

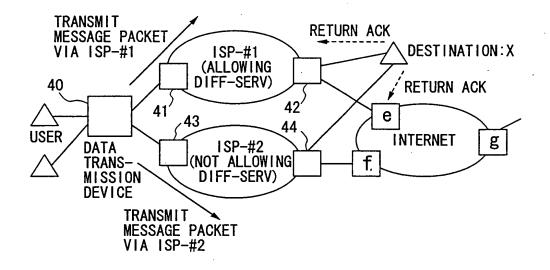
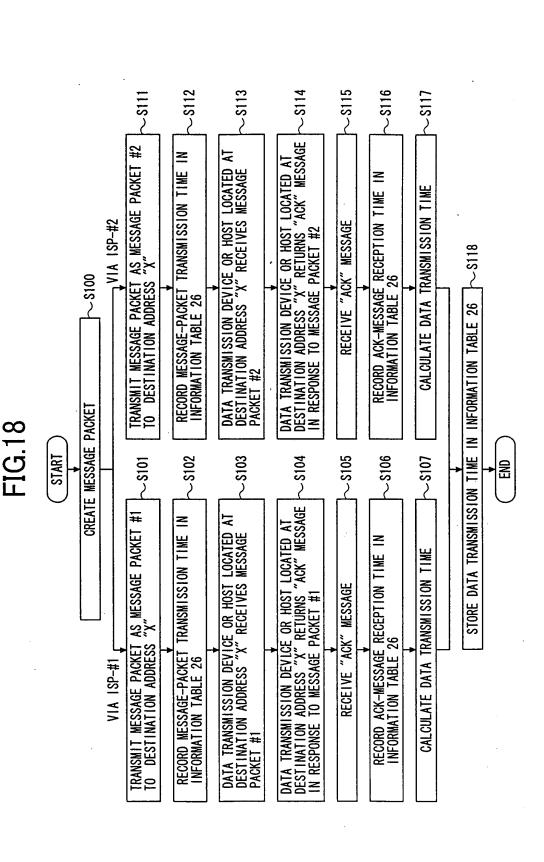


FIG.17B

INFORMATION	20	10	_	2
DATA TRANSMISSION TIME	00:00:19:894	00:00:28:183	00:00:58:564	00:00:43:173
NETWORK SERVICE CLASS TRANSMISSION RECEPTION TIME	19:03:41:347 19:04:01:241 00:00:19:894	19:04:09:530	19:04:39:911	19:03:41:347 19:04:24:520 00:00:43:173
MESSAGE-PACKET TRANSMISSION TIME	19:03:41:347	19:03:41:347	19:03:41:347	19:03:41:347
SERVICE CLASS	8Hd−J3	AF-PHB	BEST EFFORT	BEST EFFORT
"VIA" NETWORK	1#-dS1			1SP-#2
DESTINATION	×			



(

FIG.19A

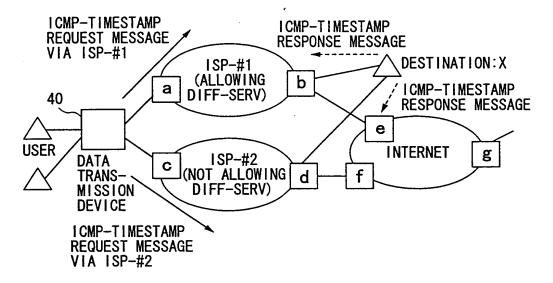


FIG.19B

PACKET LENGTH	FLAG FRAGMENT OFFSET	HEADER CHECKSUM	DDRESS	P ADDRESS	PADDING	CHECKSUM	SEQUENCE NUMBER	MESTAMP)	IESTAMP)	MESTAMP)	
VERSION HEADER LENGTH TOS	IDENTIFICATION	TTL PROTOCOL TYPE = 01	SOURCE IP ADDRESS	DESTINATION IP ADDRESS	N011d0	ICMP TYPE = 0D/0E CODE (ALWAYS 0)	IDENTIFIER	(ORIGINATE TIMESTAMP)	(RECEIVE TIMESTAMP)	(TRANSMIT TIMESTAMP)	

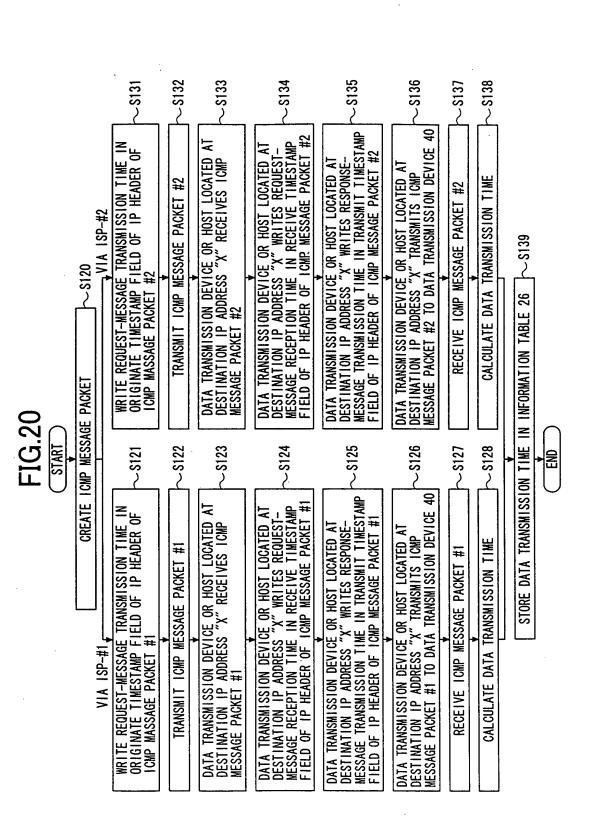


FIG. 21

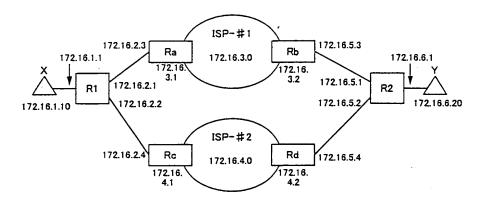


FIG.22A

DESTINATION	"VIA" NETWORK	MESSAGE-PACKET RETURN PERIOD	FEE INFORMATION
172. 16. 2. 20	ISP-#1	_	1
	ISP-#2	_	1

FIG.22B

DESTINATION IP ADDRESS	HOST/NET	NEXT HOP	OUTPUT PORT	MOST APPROPRIATE ROUTE
172. 16. 1. 10	HOST	_	1	*
172. 16. 2. 3		_	2	*
172. 16. 2. 4		· -	3	*
172. 16. 3. 0/24	NET	172. 16. 2. 3	2	*
172. 16. 4. 0/24	NET	172. 16. 2. 4	3	*
172. 16. 5. 0/24	NET	172. 16. 2. 3	2	
		172. 16. 2. 4	3	
172. 16. 6. 0/24	NET	172. 16. 2. 3	2	
		172. 16. 2. 4	3	

FIG.23A

FIG.23B

PACKET LENGTH	FRAGMENT OFFSET	HEADER CHECKSUM			ADDRESS 1 =	ADDRESS 2 =	ADDRESS 3 =	PADDING	CHECKSUM	SEQUENCE NUMBER = 0000			
PACKE	FLAG FR	HEADER	= 172, 16, 2, 1	RESS = 172, 16, 6, 20	POINTER				岩	SEQUENCE N	MP = 19:03:41:347	I MESTAMP)	[IMESTAMP]
T0S	CATION	PROTOCOL TYPE = 01	SOURCE 1P ADDRESS = 172, 16, 2, 1	DESTINATION IP ADDRESS = 172.16.6.20	OPTION LENGTH	172. 16. 2. 1 (R1)	172, 16, 4, 1 (Rc)	172. 16. 6. 20 (HOST Y)	CODE (ALWAYS 0)	R = DEAE	ORIGINATE TIMESTAMP = $19:03:41:347$	(RECEIVE TIMESTAMP)	(TRANSMIT TIMESTAMP)
VERSION HEADER LENGTH	IDENTIFICATION	111			OPTION TYPE = 10000011				ICMP TYPE = 0D	IDENTIFIER = DEAE			

FIG.24A

DESTINATION	HOST/NET	NEXT HOP	OUTPUT PORT	MOST APPROPRIATE ROUTE
172. 16. 1. 0/24	NET	172. 16. 2. 1	1	*
172. 16. 2. 0/24	NET	_	1	*
172. 16. 3. 0/24	NET	_	2	*
172. 16. 4. 0/24	NET	172. 16. 2. 1	2	*
172. 16. 5. 0/24	NET	172. 16. 3. 2	2	*
172. 16. 6. 0/24	NET	172. 16. 3. 2	2	*

FIG.24B

DESTINATION	HOST/NET	NEXT HOP	OUTPUT PORT	MOST APPROPRIATE ROUTE
172. 16. 1. 0/24	NET	172. 16. 3. 1	1	*
172. 16. 2. 0/24	NET	172. 16. 3. 1	1	*
172. 16. 3. 0/24	NET	-	1	*
172. 16. 4. 0/24	NET	172. 16. 5. 1	2	*
172. 16. 5. 0/24	NET	_	2	*
172. 16. 6. 0/24	NET	172. 16. 5. 1	2	*

FIG.24C

DESTINATION	HOST/NET	NEXT HOP	OUTPUT PORT	MOST APPROPRIATE ROUTE
172. 16. 1. 0/24	NET	172. 16. 5. 3	1	*
		172. 16. 5. 4	2	,
172. 16. 2. 0/24	NET	172. 16. 5. 3	1	*
		172. 16. 5. 4	2	
172. 16. 3. 0/24	NET	172. 16. 5. 3	1	*
172. 16. 4. 0/24	NET	172. 16. 5. 4	2	*
172. 16. 5. 0/24	NET	-	1	*
172 16 6 20	TPOH	-	3	*

FIG.25A

PACKET LENGTH	FLAG FRAGMENT OFFSET	HEADER CHECKSUM	72. 16. 6. 20	S = 172.16.2.1	CHECKSUM	SEQUENCE NUMBER = 0000	ORIGINATE TIMESTAMP = 19:03:41:347	P = 19:04:01:241	TRANSMIT TIMESTAMP = $19:04:01:583$
VERSION HEADER LENGTH TOS		TTL PR0T0C0L TYPE = 01	SOURCE 1P ADDRESS = 172, 16, 6, 20	DESTINATION IP ADDRESS = 172.16.2.1	ICMP TYPE = 0E CODE (ALWAYS 0)	IDENTIFIER = DEAD	ORIGINATE TIMEST	RECEIVE TIMESTAMP = 19:04:01:241	TRANSMIT TIMESTAN

FIG.25B

DESTINATION	"VIA" NETWORK	MESSAGE-PACKET RETURN PERIOD	FEE INFORMATION
Y	ISP-#1	00:00:19:894	1
	ISP-#2	00:00:28:183	1

FIG.25C

DESTINATION	HOST/NET	NEXT HOP	OUTPUT PORT	MOST APPROPRIATE ROUTE
172. 16. 1. 10	HOST		1	*
172. 16. 2. 3		_	2	*
172. 16. 2. 4		_	3	*
172. 16. 3. 0/24	NET	172. 16. 2. 3	2	*
172. 16. 4. 0/24	NET	172. 16. 2. 4	3	*
172. 16. 5. 0/24	NET	172. 16. 2. 3	2	*
		172. 16. 2. 4	3	
172. 16. 6. 0/24	NET	172. 16. 2. 3	2	*
		172. 16. 2. 4	3	

FIG.26

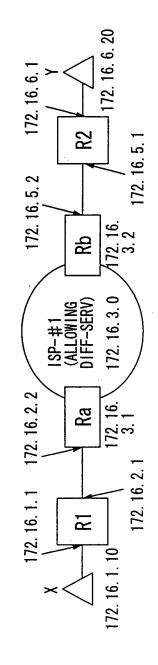


FIG.27A

DESTINATION	SERVICE CLASS	SERVICE CLASS RETURN PERIOD	FEE INFORMATION	VALUE FOR SPEED AS FIRST PRIORITY	VALUE FOR FEE AS FIRST PRIORITY
172. 16. 6. 20	EF-PHB	_	10		
	AF-PHB	-	5		
	BEST EFFORT	1	1		

FIG.27B

SERVICE CLASS MOST APPROPRIATE ROUTE	*	*						•			
OW.			ļ								
SERVICE CLASS	1	ı	EF-PHB	AF-PHB	BEST EFFORT	EF-PHB	AF-PHB	BEST EFFORT	EF-PHB	AF-PHB	BEST EFFORT
OUTPUT PORT	-	2	2			2			2		
NEXT HOP	-	-	172, 16, 2, 2			172. 16. 2. 2			172, 16, 2, 2		
HOST/NET	HOST	NET	NET			NET			NET		
DESTINATION	172. 16. 1. 10	172. 16. 2. 0/24	172, 16, 3, 0/24			172, 16, 5, 0/24		_	172, 16, 6, 0/24		

FIG.28A

			_	_			_		
PACKET LENGTH	FLAG FRAGMENT OFFSET	HEADER CHECKSUM	172. 16. 2. 1	SS = 172.16.6.20	CHECKSUM	SEQUENCE NUMBER = 0000	MP = 19:03:41:347	(IMESTAMP)	TIMESTAMP)
VERSION HEADER LENGTH EF-PHB	IDENTIFICATION	TTL PR0T0C0L TYPE = 01	SOURCE 1P ADDRESS = 172.16.2.1	DESTINATION IP ADDRESS = 172.16.6.20	ICMP TYPE = 0D CODE (ALWAYS 0)	IDENTIFIER = DEAD	ORIGINATE TIMESTAMP = 19:03:41:347	(RECEIVE TIMESTAMP)	(TRANSMIT TIMESTAMP)

FIG.28B

PACKET LENGTH	FLAG FRAGMENT OFFSET	HEADER CHECKSUM	= 172.16.2.1	DESTINATION IP ADDRESS = 172.16.6.20	CHECKSUM	SEQUENCE NUMBER = 0000	ORIGINATE TIMESTAMP = $19:03:41:347$	(RECEIVE TIMESTAMP)	(TRANSMIT TIMESTAMP)
-ENGTH AF-PHB	DENTIFICATION	PR0T0C0L TYPE = 01	SOURCE 1P ADDRESS = 172, 16, 2, 1	DESTINATION IP ADD	D CODE (ALWAYS 0)	DENTIFIER = DEAE	ORIGINATE TIMESTA	(RECEIVE	(TRANSMIT
VERSION HEADER LE		TTL			ICMP TYPE = 00	301			

FIG.28C

PACKET LENGTH	FLAG FRAGMENT OFFSET	HEADER CHECKSUM	172. 16. 2. 1	SS = 172. 16. 6. 20	CHECKSÙM	SEQUENCE NUMBER = 0000	MP = 19:03:41:347	I MESTAMP)	(TRANSMIT TIMESTAMP)
BEST EFFORT	DENTIFICATION	PR010C0L TYPE = 01	SOURCE IP ADDRESS = 172, 16, 2, 1	DESTINATION IP ADDRESS = 172.16.6.20	CODE (ALWAYS 0)	DENTIFIER = DEAF	ORIGINATE TIMESTAMP = 19:03:41:347	(RECEIVE TIMESTAMP)	(TRANSMIT
VERSION HEADER LENGTH	IDENTIF	Ш			ICMP TYPE = 0D	IDENTIFI			

FIG.29A

DESTINATION	HOST/NET	NEXT HOP	OUTPUT PORT	NEXT HOP OUTPUT PORT SERVICE CLASS APPROPRIATE ROUTE	MOST APPROPRIATE ROUTE
172. 16. 1. 0/24	NET	172. 16. 2. 1	-	I	*
172. 16. 2. 0/24	NET	1:	-	ı	*
172, 16, 3, 0/24	NET	ı	2	EF-PHB	
				AF-PHB	
				BEST EFFORT	
172, 16, 5, 0/24	LEN	172, 16, 3, 2	2	EF-PHB	
				AF-PHB	
				BEST EFFORT	
172. 16. 6. 0/24	NET	172, 16, 3, 2	2	EF-PHB	
				AF-PHB	
				BEST EFFORT	

FIG.29B

DESTINATION	HOST/NET	NEXT HOP	OUTPUT PORT	NEXT HOP OUTPUT PORT SERVICE CLASS APPROPRIATE ROUTE	MOST APPROPRIATE ROUTE
172. 16. 1. 0/24	NET	172. 16. 3. 1	_	EF-PHB	
				AF-PHB BEST EFFORT	
172, 16, 2, 0/24	NET	172, 16, 3, 1		EF-PHB	
				AF-PHB	
				BEST EFFORT	
172, 16, 3, 0/24	NET		-	EF-PHB	
				AF-PHB	
				BEST EFFORT	
172, 16, 5, 0/24	NET		2	ı	*
172, 16, 6, 0/24	NET	172. 16. 5. 1	2	-	*

FIG.29C

MOST APPROPRIATE ROUTE									*	*
OUTPUT PORT SERVICE CLASS APPROPRIATE ROUTE	EF-PHB AF-PHB	BEST EFFORT	FF-PHB	AF-PHB	BEST EFFORT	EF-PHB	AF-PHB	BEST EFFORT		
OUTPUT PORT	-		-			-			1	2
NEXT HOP	172. 16. 5. 2		172.16.5.2			172.16.5.2			_	1
HOST/NET	NET		NET			NET			NET	HOST
DESTINATION	172. 16. 1. 0/24		172, 16, 2, 0/24			172, 16, 3, 0/24			172. 16. 5. 0/24	172, 16, 6, 20

FIG 30A

PACKET LENGTH	FLAG FRAGMENT OFFSET	HEADER CHECKSUM	= 172.16.20	RESS = 172.16.2.1	CHECKSUM	SEQUENCE NUMBER = 0000	ORIGINATE TIMESTAMP = 19:03:41:347	RECEIVE TIMESTAMP = 19:04:01:241	TRANSMIT TIMESTAMP = 19:04:01:583
VERSION HEADER LENGTH TOS	IDENTIFICATION	TTL PR0T000L TYPE = 01	SOURCE 1P ADDRESS = 172.16.20	DESTINATION IP ADDRESS = 172.16.2.1	1 CMP TYPE = 0 E CODE (ALWAYS 0)	IDENTIFIER = DEAD	ORIGINATE TIMEST	RECEIVE TIMESTAN	TRANSMIT TIMESTA

FIG.30B

DESTINATION	SERVICE CLASS	CLASS MESSAGE-PACKET RETURN PERIOD	FEE INFORMATION	VALUE FOR SPEED AS FIRST PRIORITY	VALUE FOR FEE AS FIRST PRIORITY
172, 16, 6, 20	EF-PHB	00:00:19:894	20	32. 4	50.8
	AF-PHB	00:00:28:183	10	28.2	30.5
	BEST EFFORT	00:00:28:264	1	39. 4	18.7

FIG.30C

ROPRIATE UTE	FEE	*	×									*
MOST APP RO	SPEED	*	*					*				
SERVICE CLÁSS MOST APPROPRIATE ROUTE		1	1	EF-PHB	AF-PHB	BEST EFFORT	SHY-73	AF-PHB	BEST EFFORT1	8HJ-33	AF-PHB	BEST EFFORT1
OUTPUT PORT		l	2	2			2			2		
NEXT HOP		ı	1	172, 16, 2, 2			172, 16, 2, 2			172, 16, 2, 2		
HOST/NET		HOST	NET	NET			NET			NET		
DESTINATION		172. 16. 1. 10	172, 16, 2, 0/24	172. 16. 3. 0/24			172, 16, 5, 0/24			172, 16, 6, 0/24		